

Patent Application US 10/520,283 Colunga, Alfredo González ( PCT ES:2003/000396 )

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## CLAIMS ( 75 )

1.-A system for projecting images on inscribed polyhedrons having polarizable faces.  
comprising:

-an inner rear projector or bunch of projectors for projecting images such as pictures or  
5 movies;

-a polyhedron structure comprising two or more inscribed polyhedron bodies,  
concentric or not, the inner rear projector or bunch of projectors being located in the  
most inner polyhedron; wherein,

-the faces of each polyhedron body being screens formed by two sheets of glass,  
10 methacrylate or any other multilaminar material with the liquid between them  
polarizable by an electrical current for making the screen to become transparent when  
electrical current is applied and become translucent when the current stops,

-a transparent screen lets an image or a portion of image pass through it toward the next  
screen or outside the polyhedron structure and a translucent screen forms the image or a  
15 portion of image,

-an image or a portion of an image can be formed on one or another corresponding  
screen so as to modify the three-dimensional location in the space of an image or a  
portion of image;

-an spectator is allowed to see an image or a portion of an image on one or another of  
20 the corresponding screens of the polyhedron bodies without seeing the inner rear  
projector or bunch of projectors since a translucent screen is always between the  
spectator and said inner rear projector or bunch of projectors or all the screens become  
translucent;

Patent Application US 10/520,283 Colunga, Alfredo González ( PCT ES/2003/000396 )

9

-the system is able of obtaining luminic, three-dimensional and dynamic effects for holding the spectator attention at high- degree with an advertising, didactic or entertainment aim.

2.- The system according to Claim 1 wherein the inner rear projector or bunch of projectors is associated with a system of multidirectional lens or mirrors or independent auxiliary projectors in the case in which the faces of the polyhedron bodies are not parallel or the polyhedron bodies are conjugated or irregular.

3.- The system according to Claim 1 wherein the transparent or translucent state of a screen is activated into a sequence by means of a system of luminic, acoustic or thermal sensors which reacts to a stimulus or external agent, associated or not to a computer able to programme the polarization of each screen by means of an electrical current and to select the images to emit by the inner rear projector or bunch of projectors.

4.- A projection procedure utilizing a system for projecting images on inscribed polyhedrons having polarizable faces, comprising:

15 -an inner rear projector or bunch of projectors for projecting images such as pictures or movies;

-a polyhedron structure comprising two or more inscribed polyhedron bodies, concentric or not, the inner rear projector or bunch of projectors being located in the most inner polyhedron; wherein,

20 -the faces of each polyhedron body being screens formed by two sheets of glass, methacrylate or any other multilaminar material with the liquid between them polarizable by an electrical current for making the screen to become transparent when electrical current is applied and become translucent when the current stops.

Patent Application US 10/520,283 Colunga, Alfredo González ( PCT ES/2003/000396)

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-a transparent screen lets an image or a portion of image pass through it toward the next screen or outside the polyhedron structure and a translucent screen forms the image or a portion of image,

5 -an image or a portion of an image can be formed on one or another corresponding screen so as to modify the tri-dimensional location in the space of an image or a portion of image;

-an spectator is allowed to see an image or a portion of an image on one or another of the corresponding screens of the polyhedron bodies without seeing the inner rear projector or bunch of projectors since a translucent screen is always between the  
10 spectator and said inner rear projector or bunch of projectors or all the screens become translucent;

the procedure comprising the step of:

selectively polarize or depolarize by electrical current the liquid between the two sheets of a screen so as to cause the screen to become transparent or translucent in order to  
15 project an image or a portion of image, so as to obtain luminic, tri-dimensional and dynamic effects for holding the spectator attention at high-degree with an advertising, didactic or entertainment aim.

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